03050202-060

(Atlantic Intracoastal Waterway)

General Description

Watershed 03050202-060 is located in Charleston County and consists primarily of the ***Atlantic Intracoastal Waterway*** and its tributaries from the Ben Sawyer Bridge to the South Santee River. The watershed occupies 118,578 acres of the Coastal Zone region of South Carolina. The predominant soil types consist of an association of the Bohicket-Capers-Chipley series. The erodibility of the soil (K) averages 0.20; the slope of the terrain averages 1%, with a range of 0-2%. Land use/land cover in the watershed includes: 40.3% nonforested wetland, 26.9% forested land,19.1% water, 5.7% scrub/shrub land, 4.1% forested wetland, 2.9% urban land, 0.5% agricultural land, and 0.5% barren land.

This watershed consists of the Atlantic Intracoastal Waterway (AIWW), which flows past numerous sea islands and the tidally influenced creeks that separate them. This reach of the AIWW is classified SFH. There are a total of 117.6 square miles of estuarine areas in this watershed. Inlet Creek, Swinton Creek, and Conch Creek located near Sullivans Island, drain to the Atlantic Ocean via Breach Inlet. Morgan Creek, Seven Reaches, and Cedar Creek flow into Meeting Reach (AIWW). Seven Reaches also drains into Gray Sound (SFH)as does Hamlin Creek and Long Creek. Hamlin and Long Creeks also flow into Hamlin Sound (SFH), which in turn drains into Copahee Sound (ORW) and Bullyard Sound (ORW). Dewees Creek collects drainage from Bullyard Sound and Hamlin Sound, together with Old House Creek and Horsebend Creek, and flows through Dewees Inlet (SFH) to the Atlantic Ocean.

Capers Creek, Watermelon Creek, Toomer Creek, and Whiteside Creek drain to the ocean through Capers Inlet (ORW). The Santee Pass connects Capers Creek to Mark Bay (ORW) and drains to the ocean via Price Inlet (ORW). Other streams draining into Price Inlet include Price Creek, Clauson Creek, and Bull Narrows. Bull Narrows also flows into Sewee Bay (SFH) and Hickory Bay. Back Creek connects Sewee Bay to Bull Creek (Summerhouse Creek, Jack Creek), which flows into Bull Harbor and Bulls Bay (ORW). Other streams draining into Bull Harbor and Bulls Bay include Anderson Creek, Blind Creek, Venning Creek, Belvedere Creek, Vanderhorst Creek, Saltpond Creek, and Graham Creek.

Bell Creek (Cooter Creek, Withey Wood Canal) and Steed Creek join to form Awendaw Creek and Lake Awendaw (125 acres), which flows into the Harbor River (AIWW) and into Bulls Bay. Other streams draining into the Harbor River from the mainland, near the Town of McClellanville, include Sandy Point Creek, Doe Hall Creek, Tibwin Creek, and Long Creek. Bull River (Sett Creek, Little Sett Creek) and Five Fathom Creek (Clark Creek, Key Creek, Key Bay, Santee Path Creek, Papas Creek, Little Papas Creek, Matthews Creek, Town Creek, Clubhouse Creek) drain directly into Bulls Bay. Five Fathom Creek is classified SFH. Jeremy Creek flows into the AIWW across the waterway from

Five Fathom Creek. Clubhouse Creek connects Five Fathom Creek to Oyster Bay and Muddy Bay (Nellie Creek, Joe and Ben Creek, Shrine Creek, Horsehead Creek).

The Romain River is formed at the confluence of Santee Path Creek and Nellie Creek, and accepts drainage from Key Creek (Bay Creek), Muddy Bay, and Slack Reach (Devils Den Creek, Horsehead Creek, Mill Den Creek) before flowing into Cape Romain Harbor (ORW). Key Creek also drains into the ocean via Raccoon Creek and Key Inlet. Other streams draining in Cape Romain Harbor include Congaree Boat Creek (Joe and Ben Creek), Casino Creek (Mill Creek, Needles Eye Creek), Deepwater Creek, and Alligator Creek (Ramhorn Creek). Additional natural resources in the watershed include the Cape Romain National Wildlife Refuge (55,000 acres) and portions of the Frances Marion National Forest.

Water Quality

Station #	Type	Class	Description
MD-069	P	SB/SFH	AIWW AT SC 703 E MOUNT PLEASANT
MD-250	W	SFH	AWENDAW CREEK AT US 17
MD-203	P	SFH	JEREMY CK NEAR BOAT LANDING -MCCLELLANVILLE TOWN HALL

Awendaw Creek (MD-250) - Aquatic life uses are fully supported. This is a tidally influenced system, often characterized by naturally low pH and dissolved oxygen concentrations. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in such systems and were considered natural, not standards violations. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Jeremy Creek (MD-203) - Aquatic life uses are fully supported; however there is a significant increasing trend in total nitrogen concentrations, and a very high concentration of zinc was measured in 1998. There is also a significant increasing trend in pH. P,P'DDE (a metabolite of DDT) was detected in the 1997 sediment sample and exceeded the Effects Range Low (ERL) concentration, but was less than the Effects Range Median (ERM) concentration. Although the use of DDT was banned in 1973, it is very persistent in the environment. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Atlantic Intracoastal Waterway (MD-069) - Aquatic life uses are fully supported; however there is a significant decreasing trend in dissolved oxygen concentrations. There is also a significant decreasing trend in pH. Recreational uses are fully supported.

Santee Coastal Reserve Pond **-** The pond was treated in 1994, 1995, 1997, and 1998 with aquatic herbicides to control aquatic plant growth and reclaim recreational areas for waterfowl management and hunting.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)* *COMMENT*	*NPDES#* *TYPE* *LIMITATION*
JEREMY CREEK TRIBUTARY LINCOLN HIGH SCHOOL WWTP PIPE #: 001 FLOW: 0.016	SC0033618 MINOR DOMESTIC WQL FOR BOD_5, TRC, NH3-N, DO
HAMLIN CREEK CITY OF ISLE OF PALMS WTP PIPE #: 001 FLOW: M/R WQL FOR TRC	SC0043583 MINOR DOMESTIC WATER QUALITY
MEETING REACH ISLE OF PALMS/FOREST TRAILS SD PIPE #: 001 FLOW: 0.30	SC0025283 MINOR DOMESTIC EFFLUENT
DEWEES CREEK TOWN OF DEWEES ISLAND WTP PIPE #: 001 FLOW: 0.025 UNCONSTRUCTED	SC0046817 MINOR DOMESTIC EFFLUENT
CLAUSON CREEK LOWCOUNTRY DIRT/SCHAFFER MINE PIPE #: 001 FLOW: M/R	SCG730102 MINOR INDUSTRIAL EFFLUENT
AIWW UNNAMED TRIBUTARY ST JAMES/SANTEE ELEM. PIPE #: 001 FLOW: M/R	SCG645033 MINOR DOMESTIC EFFLUENT
AIWW UNNAMED TRIBUTARY CHAS. CPW/BEAN PIT PIPE #: 001 FLOW: M/R	SCG730226 MINOR INDUSTRIAL EFFLUENT
AIWW UNNAMED TRIBUTARY MT PLEASANT/CENTER ST. PIPE #: 004 FLOW: M/R	SC0040771 MAJOR DOMESTIC EFFLUENT
AIWW UNNAMED TRIBUTARY D&A PARTNERSHIP/SHELLPOINT PIT PIPE #: 001 FLOW: M/R	SCG730074 MINOR INDUSTRIAL EFFLUENT

Nonpoint Source Management Program

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
ISLAND CONSTRUCTION CO., INC. MOUNT PLEASANT PIT	0183-19 SAND/CLAY
ADDCO MINING COMPANY	0236-19

SHELL POINT MINE	SAND/CLAY
ISLAND DIRT, INC.	0657-19
OAKLAND MINE	SAND/CLAY
LOWCOUNTRY DIRT, INC.	1004-19
SCHAFFER MINE	SAND/TOPSOIL
CHARLESTON CO. PUBLIC WORKS	1159-19
BEAN PIT	SAND

Land Disposal Activities

Landfill Facilities

SOLID WASTE LANDFILL NAME ***FACILITY TYPE***	***PERMIT #*** ***STATUS***
PINCKNEY ROAD DUMP	-------
MUNICIPAL	CLOSED
ISLE OF PALMS DUMP	-------
MUNICIPAL	CLOSED

Land Application Sites

LAND APPLICATION SYSTEM ***FACILITY NAME***	***ND#*** ***TYPE***
TILE FIELD	ND0069329
DEWEES UTILITY CORP.	DOMESTIC
SPRAYFIELD	ND0080446
VILLAGE VARIETY LAUNDROMAT	INDUSTRIAL
SPRAY ON GOLF COURSE	ND0062260
ISLE OF PALMS/WILD DUNES BEACH	DOMESTIC
SPRAYFIELD	ND0073016
CHAS. CO. SCHOOLS/LINCOLN HIGH SCHOOL	DOMESTIC

Growth Potential

There is a high potential for growth in this watershed. Several suburban growth areas surround the City of Charleston. Some of the larger planned developments include Wild Dunes, Shell Point, Hidden Lakes, Seaside Farms, Palmetto Fort, and the Charleston National Country Club. All growth areas in the watershed have water and sewer services available. Sources of tourism in this watershed include Patriots Point and Fort Moultrie. Although the McClellanville area experiences scattered low density development, significant growth is not anticipated.

Watershed Protection and Restoration

Special Projects

East Cooper NPS Management Plan

The Department of Health and Environmental Control implemented a comprehensive project in a coastal watershed located in Charleston County. Five cooperating agencies implemented various components of the project. The stated goal of the project was to maintain and enhance existing water quality and uses in this urban and suburban watershed by reducing and/or eliminating NPS pollution . The primary objective was to develop an action plan that would be adopted and implemented at the local level. Secondary objectives included: 1) establishment of a sustainable public information/education program to foster attitude changes in citizens, influence appropriate local government action, and transfer specific information on how to prevent NPS pollution to target audiences, 2) documentation of pollution sources and specific problem areas through monitoring followed by selection of the most responsive, workable and cost-effective BMPs to control the identified sources, and 3) post-implementation monitoring to determine progress toward meeting the goal. Project outputs included: 1) publication and continued implementation of the *East Cooper NPS Management Project Action Plan*, 2) development and production of educational materials specifically for the project such as *Turning the Tide* newsletter, informational video, project poster, various brochures, and curriculum enhancement materials, and 3) development and implementation of a monitoring strategy based on field identification of potential sources or land uses, aerial photography, and analysis of existing water quality data. The Clean Water Council, a local citizens group then implemented the Action Plan in a continuation of phase one of the project. Efforts focused on municipal official and public NPS education. The group also continued and built upon the water quality monitoring begun at the outset of the project in 1991. The recommendations of the Action Plan were incorporated into the City of Isle of Palms Comprehensive Plan.